

Response to Comments

TECHNICAL REVIEW

DRAFT FINAL CONSTRUCTION WORK PLAN AND CONSTRUCTION QUALITY ASSURANCE PLAN FOR SECURE LANDFILL CELL 3 EXPANSION

ARCONIC INC., MASSENA, NEW YORK

EPA contractor Booz Allen Hamilton (Booz Allen) has completed a technical review of the February 2017 Draft Final Construction Work Plan (CWP) for expansion of Secure Landfill Cell 3 at the Arconic Inc. (Arconic) facility in Massena, New York. Arconic plans to increase capacity of Cell 3 by raising the height of the eastern berm of the existing cell. A temporary berm will be installed within the cell to physically separate the construction area from the western portion of the cell, which will continue to receive wastes for disposal. The CWP and its appendices provide detail on site work to be completed, engineering drawings and specifications, contractor quality control, test fill activities, storm water pollution prevention plans (SWPPP), and a project schedule for the expansion effort. Booz Allen has also completed a technical review of the January 13, 2017 Construction Quality Assurance Plan (CQAP) for the Cell 3 expansion effort.

Arconic's draft final submittals were reviewed for technical adequacy, potential impacts on concurrent Cell 3 operational activities, and compliance with regulations pertaining to the Resource Conservation and Recovery Act (RCRA) and the Toxic Substance Control Act (TSCA). Comments developed during the review of expansion documentation are provided below. Documents detailing ongoing Cell 3 operations and maintenance were provided to EPA under separate cover, were reviewed and addressed by Booz Allen in a separate comments letter, and are not further discussed below:

I. Agency General Comment on the CWP

- 1. The second paragraph in CWP Section 1.0, Introduction, states that the proposed efforts will provide increased Cell 3 landfill capacity primarily by "expanding the height of the eastern and southern berms." This scope of work is reiterated several times in various appendices to the CWP. However, a comparison between Drawings B-203351-JM (existing conditions) and B-203352-JM (proposed east berm grading plan) suggests that only the eastern berm will be significantly altered. Additionally, Section 1.0 of the CWP and the Summary of Work Specification in Appendix A (Section 01010, paragraph 1.02(B)(5)) both support alterations only to the eastern berm of existing Cell 3. Although some grading will be conducted on the northeastern and southeastern corners of the expanded landfill, these efforts will largely be focused on integrating the raised eastern berm into existing berms on the north and south sides of Cell 3 berms. Revise the CWP and appendices to consistently and accurately present the scope of expansion work to be conducted.*

Arconic Response General Comment 1: Section 1.0 Introduction of the CWP, will be revised to state that the Cell 3 expansion will primarily involve raising of the eastern berm (only), consistent with the Summary of Work Specification in Appendix A (Section 01010, paragraph 1.02(B)(5)).

II. Specific Comments on the CWP

Section 1.0. Introduction

1. *Revise the bulleted list at the bottom of page 1 to refer to installation of a sliding gate at Entrance 5, as shown on Figure 4-1. This same correction should be made throughout the CWP (e.g., Section 4.4) and its appendices (e.g., Section 3.1 of Appendix D).*

Arconic Response Specific Comment 1: A remote-controlled sliding gate at Entrance #6 (Gate #6) will be installed to replace the existing two swing gates. Figure 4-1 and the design drawings incorrectly call-out Entrance #5 (Gate #5). The CWP text, Appendix D, Figure 4-1, and the design drawings will be corrected.

Section 3.1, Work Plan Documents

2. *This section refers to the Test Fill Site Plan and Material Management Area Site Plan, which is reportedly provided as Appendix C to the CWP. However, that appendix only presents details on the program to be used to establish methods and procedures to be used during construction of the expanded cell's low permeability soil (LPS) liner. Appendix C does not provide details on what materials will be managed within the proposed staging area (beyond the southwestern corner where test fill activities will occur). Revise the text of Section 3.1 to delete erroneous references to material management details in Appendix C, and expand CWP Section 4.5 to outline storage plans for this area. Will this area be used for temporary management of purchased product only, or will it also be used for temporary management of topsoil and clay removed during various construction steps? Will this area be used for equipment laydown and maintenance activities?*

Arconic Response Specific Comment 2: The material management area is intended to provide Tetra Tech the flexibility to store clean materials (off-site borrow soils, liner, geotextile fabric, silt fence) and clean equipment throughout the project. No PCB-impacted waste will be permitted in this area; trucks containing PCB-impacted waste will dump directly into Cell 3 west of the temporary berm. Existing non-impacted soil relocated from the Cell 3 expansion area will be placed east of the material management area. References will be corrected in Section 3.1. CWP Section 4.5 will be revised to include a description of equipment and materials that will be stored in the Material Management Area.

Section 4.2. Office Facilities and Work Zones

3. *This section outlines provision of mobile office facilities, electrical service, and utilities to the Cell 3 area at the beginning of the proposed effort. This activity appears to overlap with support needs for ongoing operation and maintenance (O&M) of existing Cell 3. Clarify that these efforts will be conducted in coordination with the Final O&M Manual for Cell 3, and that the activities will not be duplicated.*

Arconic Response Specific Comment 3: Ongoing, routine SLF O&M tasks (i.e., SLF leachate collection/treatment, groundwater monitoring) are conducted by Arconic Plant personnel. Although the Alcoa Plant personnel utilizes the Final O&M Manual as reference to conduct their work, these tasks are not part of the Cell 3 Expansion project nor will there be any effort

duplication between the Arconic Plant personnel and the Tetra Tech personnel. Tetra Tech's office facilities and work zones are not associated with the ongoing, routine SLF O&M tasks.

4. *This section states that work zones will be established, including exclusion zones, pursuant to the Final O&M Manual for Cell 3. However, that manual does not include such details. Expand relevant figures and drawings to provide a clear map of Cell 3 work zones.*

Arconic Response Specific Comment 4: Section 4.2 will be revised to remove the reference to the Final O&M Manual and to describe the clean work zones; the figures will reflect these work zones. The CWP for the Cell 3 Expansion will not include exclusion zones and decontamination transition zones; they will be described in the CWP for the Cell 3 Operations.

Section 4.5, Test Fill and Material Management Area Construction

5. *Expand this section to clarify whether test fill results and recommendations will be provided to the New York State Department of Environmental Conservation (NYSDEC) and EPA for review and approval prior to implementation across the footprint of the Cell 3 expansion. The CWP (Section 6.0) currently only provides for transmittal of test fill findings to the Agencies as part of the Final Post-Construction Report for this effort. It is noted that the project schedule provided as Appendix E to the CWP includes line item 2.3.8.3 which requires approval of the test fill report before installing the compacted clay liner, but no indication is provided as to from whom that approval must come.*

Arconic Response Specific Comment 5: The purpose of the test fill is to determine the means and methods for the clay placement to achieve the low permeability of the cell liner. The means and methods will then be used for clay placement in Cell 3. The key outcomes of the test fill will include lift thicknesses, number of passes with compaction equipment and placement moisture contents for the clay in the Cell 3 liner. The current test fill work plan requires approval of the test fill report from Arconic's CQA personnel and the Engineer of Record prior to installing the compacted clay liner. The test fill work plan will be revised to include submittal of the test fill report to the NYSDEC for review and approval and to the EPA for review and concurrence prior to construction of the compacted clay liner. In addition, results from ongoing CQA testing during the test pad will be provided to EPA and NYSDEC in the daily CQI field reports.

Section 4.8, Erosion Control

6. *The third sentence in this section notes that work areas within the landfill will be bermed to minimize run-on and prevent run-off of contaminated water. Given that wastes within the eastern portion of existing Cell 3 will be relocated, the liner surface will be decontaminated, and a temporary berm will be constructed to physically separate the clean construction zone from ongoing waste operations, it is unclear how run-off from the eastern expansion area could become contaminated during work covered by this CWP. Clarify the source of this contamination, and clarify whether the text refers to chemical contamination or entrainment of sediment.*

Arconic Response Specific Comment 6: The reference to run-off of contaminated water will be modified to "minimize erosion due to storm water runoff".

Section 4.13. Install Compacted Clay Liner

7. *Expand this section to clarify whether clay removed from the crest of existing berms (as noted in CWP Section 4.12) will be reused during construction of the compacted clay liner, and what testing will be performed to ensure that all clay used for this purpose meets stated moisture content specifications.*

Arconic Response Specific Comment 7: Clay removed from the crest of the existing berm will be stockpiled separately for potential re-use as part of the clay liner for the berm expansion at the discretion of the Engineer. Clay used in the liner will be sourced from an off-site pre-approved borrow source which will be assessed by the Engineer based on visual observations and laboratory testing (if needed) which will include the parameters listed in Table 2-7 of the CQAP.

Section 4.14, Liner System Installation

8. *This section notes that the expanded liner will “tie-in with the existing liner system (including geosynthetic clay liner, geomembrane, and geotextile layers).” Drawing B-203356-JM provides a limited amount of detail on integration of the existing liner system with that proposed for the expansion, but Note 1 from that detail states that the contractor will provide detailed shop drawings and a work plan, including measures to limit and control leachate migration during this construction component. No detail is provided with regard to any tilling, scarification, compaction, or other procedures to ensure that these areas of overlap are completely integrated (as mandated with regard to integration of clay lifts during LPS liner installation in Specification 02201, paragraph 3.01E). Furthermore, no detail is provided in the CWP as to the means by which manufactured components will be tied together (e.g., width of overlap, sealing of joints, welding). Revise the CWP to include such detail in the text, or directly reference pertinent sections in Appendix A specifications (e.g., Section 02272, paragraph 3.02C). The referenced detailed shop drawings and work plan should be made available for review as soon as possible and prior to initiating liner placement in the Cell 3 expansion area.*

Arconic Response Specific Comment 8: The Contractor will provide a geomembrane and GCL panel layout detailing the seam locations and overlaps for tie-in of new to existing primary and secondary geosynthetic liner components as specified under Section 02273, paragraph 1.03. The geomembrane and GCL panel layouts will be reviewed and approved by the Engineer prior to liner construction. The geomembrane and GCL panel layouts will also be provided to the EPA and NYSDEC for review prior to installation of liner components. As stated in Section 4.14, the Contractor will place a rain tarp over open excavated waste areas and exposed geosynthetics to limit leachate generation from precipitation during construction.

Reference to Specification section 02201, paragraph 3.01E for scarification of existing clay surfaces prior to placement of new clay liner and Section 02272, paragraph 3.02C for seaming of liner geosynthetic components will be added to the CWP.

Section 4.17, Site Restoration and Vegetation Maintenance

9. *Clarify that the specified topsoil replacement and seeding activities will occur on berms and other disturbed areas around and outside of waste placement areas of expanded Cell 3.*

In addition, because the stipulated 10-week maintenance period may be insufficient for achievement of an appropriately robust vegetative layer (particularly if erosional damage occurs during the growing period), Arconic should expand the last paragraph in this section to allow for the possibility that an extended maintenance period may be necessary if relevant criteria (stipulated in the SWPPP) are not met within the initial 10 weeks.

Arconic Response Specific Comment 9: This section will be revised to include extended maintenance requirements by Tetra Tech and/or Arconic.

Section 4.18, Demobilization

10. *Prior to demobilization, it is necessary to survey and prepare as-built drawings of the completed Cell 3 expansion. Expand the CWP accordingly.*

Arconic Response Specific Comment 10: A final survey completed by Tetra Tech prior to demobilization and as-built drawings based on the final survey completed by CDM Smith are required as part of the Cell 3 Expansion project. This will be noted in the CWP.

Section 6.0, Post-Construction Reporting

11. *Clarify this section to indicate what “post-construction monitoring” is proposed for the Cell 3 expansion and what specific monitoring data will be provided in the Final Report.*

Arconic Response Specific Comment 11: There are Post-Construction Reporting requirements that Tetra Tech must complete for the Cell 3 Expansion Certification Report. Post-construction monitoring requirements will include inspection and repairs, if necessary, of the storm water controls and vegetated top soil to ensure the site is in adequate condition for the next phase of the project. This section will be expanded to reflect these activities.

III. Comments on CWP Appendix A, Cell 3 Expansion Design Drawings and Specifications

1. *Design drawings in this appendix are stamped to indicate that they are for bid purposes only, rather than actual construction. The CWP must be updated to include construction drawings for the cell substructure, liner system, and related features.*

Arconic Response Appendix A Comment 1: A final set of signed and sealed drawings and specifications will be released as “Release for Construction” after edits are made and with agency approvals.

2. *Drawings B-203358-JM and B-203359-JM in Appendix A, respectively, refer to the minimum and maximum build-out configurations for the Cell 3 expansion. The CWP should clarify that details, drawings, and specifications regarding the final landfill cover and revegetation of the landfill footprint will be provided formally as part of the closure plan for this unit (taking final waste elevations into account).*

Arconic Response Appendix A Comment 2: The CWP will be revised to clarify that details, drawings and specifications for final landfill cover construction and revegetation of final cover will be provided as part of the closure plan based on final waste elevations at closure.

3. *Although the SWPPP provided in Appendix Q to the CWP refers to an “intermediate cover” to be installed at the end of each field season, no construction detail, diagrams, specifications, or schedules have been provided to address construction of this field component. Maintenance requirements for the “winter stabilization” features are shown on SWPPP Sheet 3, but nowhere else in the documents. Expand the CWP and its appendices (specifically Appendix A) accordingly. If no such temporary covers or other winter stabilization components will be provided at the end of the operating season, affected sections of the SWPPP (e.g., Sections 4.2 and 4.3, Sheet 2) will require revision to remove such suggestions.*

Arconic Response Appendix A Comment 3: The expansion of Cell 3 will be completed prior to the winter season and therefore protection of the clay liner will follow operations requirements, as identified in Section 2.1.2 – Frost Protection, of the Operations and Maintenance Manual. The winter stabilization features will be removed from Sheet 3 of the SWPPP. The use of a temporary cover (post completion of the Cell 3 expansion) for winter stabilization will be evaluated. A plan will be submitted to the agencies detailing the proposed means and methods by August 1, 2017.

4. *Section 01010, Summary of Work. Expand paragraph 1.02B (11) to identify surveys to be performed prior to, during, and upon completion of the Cell 3 expansion effort.*

Arconic Response Appendix A Comment 4: Section 01010, Summary of Work will be expanded to include surveys to be performed prior to, during, and upon completion of Cell 3 expansion.

5. Section 01300 Submittals: Numerous consistency issues have been identified between Table 1 in Section 01300 and other detailed specifications in Appendix A:

- Sections cited in this table, listing requisition items for the Cell 3 expansion project, are inconsistent with specifications provided. For example, select fill specifications are outlined in paragraph 2.01D of Section 02200, not paragraph 2.01C. Review the specifications and correct all erroneous references in Table 1.
- Although not listed in the table, paragraphs 2.01J and 2.01E of Section 02200 should be referenced for discussion of erosion control blanket and rip rap material requirements. Tackifier is discussed in paragraph 3.01B of Section 02930 (although not product requirements are noted), and erosion control blankets/staples are addressed in paragraph 3.02 of that same section. Review all project requirements, and ensure that each item to be procured is properly identified in Table 1.
- Sections 02277 (Geogrid Material) and 26020 (Electrical) are provided in the appendix, but are not listed in Table 1. Expand the table accordingly.
- Although referenced in the table, Sections 02605, 02638, 11319, and 16191 are not included in the appendix for review. Revise Appendix A to include all relevant specifications.

Arconic Response Appendix A Comment 5: Table 1 in Section 01300 will be revised as needed to conform to the specification requirements in Appendix A. Note that specification Sections 02605, 02638, 11319 and 16191 are not applicable to construction of the Cell 3 expansion and related submittals under these Sections included in Table 1 will be removed.

6. Section 01301, Design Change Order Procedures. Paragraph 1.05 should be modified to also require EPA review and concurrence of design changes.

Arconic Response Appendix A Comment 6: Paragraph 1.05 of Specification Section 01301 will be modified to require NYSDEC review and approval and EPA review and concurrence of all major design changes. Minor design clarifications will be handled with a Design Clarification Form (DCO) that will be provided to NYSDEC and EPA for information.

7. Section 02200, Earthwork. Paragraph 3.16B states that the contractor “shall conform to all applicable specifications not in Section 02272, Geotextile Fabric” (emphasis added). Clarify whether this is statement is a typographical error, or identify the range and source of addition specifications to be followed during placement of the drainage layer.

Arconic Response Appendix A Comment 7: The statement “Contractor shall conform to all applicable specifications not in Section 02272, Geotextile Fabric” reflects a typographical error. The sentence will be corrected to state that “Contractor shall conform to all applicable specifications in Section 02272, Geotextile Fabric”.

8. Section 02272, Geotextile Fabrics. Revise the title for ASTM Method D3776 in paragraph 1.04A to delete the qualifier “woven”.

Arconic Response Appendix A Comment 8: The title for ASTM Method D3776 in Section 02272, Geotextile Fabrics will be corrected.

9. Section 02272, Geotextile Fabrics. Expand paragraph 3.06 to require that the installed fabric be inspected for proper installation and/or damage both before and after placement of the soil cover pursuant to paragraph 3.03 of this specification.

Arconic Response Appendix A Comment 9: Paragraph 3.06 of Section 02272: Geotextile Fabrics will be revised to include inspection by the CQA personnel for proper installation and/or damage before and after placement of the soil cover.

10. Section 02273, HDPE Membrane Liner. Revise the title for ASTM Method D882 in paragraph 1.03A (sic) to replace “this” with “thin”. Revise the title for ASTM Method D1204 of this same paragraph to replace “elevation” with “elevated”.

Arconic Response Appendix A Comment 10: The titles for ASTM Method D882 and D1204 will be corrected as noted.

11. Section 02273, HDPE Membrane Liner. Expand paragraph 3.06 to require that the installed liner be inspected for proper installation and/or damage prior to placement of additional, overlying cover layer components.

Arconic Response Appendix A Comment 11: Paragraph 3.06 will be revised to include inspection by CQA personnel for proper installation and/or damage prior to placement of additional, overlying cover layer components.

12. Section 02274, Geonet. Expand paragraph 3.01A (4) to require that the installed geonet be inspected for proper installation and/or excessive dust prior to placement of additional, overlying cover layer components.

Arconic Response Appendix A Comment 12: Paragraph 3.01A (4) will be revised to include inspection by CQA personnel for proper installation and/or excessive dust prior to placement of additional, overlying cover layer components.

13. Section 02275, Geosynthetic Clay Liner. Expand paragraph 3.04 to require that the installed geosynthetic clay liner be inspected for proper installation and/or damage prior to placement of additional, overlying cover layer components.

Arconic Response Appendix A Comment 13: Paragraph 3.04 will be revised to include inspection by CQA personnel for proper installation and/or damage prior to placement of additional, overlying cover layer components.

14. *Section 02930, Loaming and Hydroseeding. Paragraph 3.03C identifies criteria to be used to confirm achievement of a satisfactory turf layers in revegetated areas. However, these criteria differ significantly from the 80% coverage requirement listed in the SWPPP. Paragraph 3.03D also discusses soil testing that will be conducted to determine if additional fertilization is needed; such soil testing was not mentioned elsewhere in the CWP or its appendices. Revise the documentation to be consistent with Specification 02930 on these issues.*

Arconic Response Appendix A Comment 14: Criteria for permanent vegetation in Paragraph 4.4.1, Establishment of Permanent Vegetation of the SWPPP will be revised to conform to the requirements specified in Paragraph 3.03C of specification Section 02930, Loaming and Hydroseeding. The soil testing requirements specified under Paragraph 3.03D of Section 02930 will also be referenced in the SWPPP.

IV. Comments on CWP Appendix B, Construction Quality Control

Section 2.1, CQC Personnel

1. *The first paragraph on page 2 of the states that “the Project Manager is responsible for coordinating the development, approval, and implementation of design changes with the Design Engineer, Project Engineer, Owner, and NYSDEC”. This statement should be modified to also require EPA review and concurrence of design changes.*

Arconic Response Appendix B Comment 1: All major design changes will be submitted to NYSDEC for review and approval and EPA for review and concurrence. Minor design clarifications will be handled with a Design Clarification Form (DCO) that will be provided to NYSDEC and EPA for information.

Section 4.0, Earthwork Construction

2. *This section details earthwork components to be conducted as part of the Cell 3 expansion effort. Accordingly, the list should be clarified to note that installation of the temporary berm will be conducted pursuant to details provided in the separately submitted documentation on ongoing operation and maintenance of existing Cell 3. Similarly, the last two bullets should be modified to reflect only restoration and revegetation of berms and other disturbed areas outside the limits of waste placement (prior to initiation of landfill closure activities).*

Arconic Response Appendix B Comment 2: The list in section 4.0 will be modified. Temporary drainage layer removal and the installation of the temporary berm bullets will include a clarifying statement that these activities are considered part of the Cell 3 operations and must be completed prior to the expansion. The toe drain is part of this work and will be added to this list. The final cover is not part of this work and will be removed from this list. Top soil and seed will be part of this work which is outside the impacted area.

V. Comments on CWP Appendix C, Test Fill Work Plan

General Comment

- 1. Expand this plan to clarify whether test fill results and recommendations will be provided to NYSDEC and EPA for review and approval prior to implementation across the footprint of the Cell 3 expansion. The CWP (Section 6.0) currently only provides for transmittal of test fill findings to the Agencies as part of the Final Post-Construction Report for this effort. It is noted that the project schedule provided as Appendix E to the CWP includes line item 2.3.8.3 which requires approval of the test fill report before installing the compacted clay liner, but no indication is provided as to from whom that approval must come.*

Arconic Response Appendix C Comment 1: Please refer to 'Arconic Response Specific Comment II.5' on the CWP for response.

Section 1.0, Introduction

- 2. This section states that construction of the test fill will simulate construction of the LPS liner using "representative worst case low permeability soils." Clarify why the soils proposed for use represent the "worst case" conditions, and what construction material/method modifications may be needed in the event that these "worst case" conditions are unsuitable for construction or inadequate to achieve compliance with RCRA and/or TSCA regulations for liner systems.*

Arconic Response Appendix C Comment 2: This section will be revised to remove "representative worst case low permeability soils". The test fill will be completed in accordance with the agency-approved drawings and specifications using marine gray clay provided by Arconic. This material has been used previously to construct the SLF Cell 1, 2, and 3 clay liners; this material is in compliance with the material specification and is in compliance with RCRA and TSCA regulation for liner systems.

Section 2.0. Construction Materials

- 3. The second sentence in this section states that at least one sample will be collected from each of the proposed borrow sources for geotechnical analyses. Clarify the protocol for soil sample collection, specifically noting that the samples will be composited from various locations within the borrow area or soil stockpile. Any soil within the stockpile or borrow area that appears substantially different from surrounding soil should be specifically targeted for discrete sampling. These clarifications should also be made in the first bullet on page 5 of the Test Fill Work Plan.*

Arconic Response Appendix C Comment 3: Low permeability soil (clay) for the test fill and clay liner construction will be provided by Arconic from a borrow source pre-approved by the Engineer. Results of laboratory tests conducted on representative samples from the borrow source were included in DCO 31 submitted to the EPA and NYSDEC. The clay will be stockpiled at the Site prior to test fill construction. Clay samples will be retrieved from the top middle and toe of stockpile and composited for laboratory testing prior to test fill construction. Clay that appears substantially different from the rest of the clay will be removed and not used or sampled. The test fill work plan will be revised to include these sampling protocols.

4. *The second paragraph in this section states that the selected borrow material will be retested prior to construction of the test fill. The borrow soil should be tested at intervals during construction of both the test fill and the actual LPS liner. Clarify how frequently such samples will be collected, document that they will be reanalyzed for all five parameters listed in this section, and discuss acceptance criteria for the soil (i.e., how widely can soil characteristics vary and still be suitable for use).*

Arconic Response Appendix C Comment 4: The CWP will be revised to include testing of clay before construction of test fill and actual LPS liner at frequencies specified in Table 2-7 of the CQAP. The clay for the test fill and the LPS liner shall meet the material properties specified in Specification Section 02201: Low Permeability Soil, 2.01.

Section 3.0, Inspection and Testing

5. *This section refers to the construction control grid, which will be used to define various locations across the test fill area. The second sentence specifically notes that the grid will help to identify location of “tops and toes of slope,” but nothing in the Test Fill Work Plan mentions sloped placement of fill in the test plot. Revise the plan to discuss the means by which test fill activities will simulate construction of the LPS liner on the internal side slopes of the expanded landfill cell.*

Arconic Response Appendix C Comment 5: The test fill area is located on a flat surface and will not be constructed to simulate side slopes of the expanded landfill. References to “tops and toes of slope” will be removed from Section 3, Inspection and Testing. The test fill will be completed in accordance with the agency-approved drawings and specifications using marine gray clay provided by Arconic. This material has been used previously to construct the SLF Cell 1, 2, and 3 clay liners; this material is in compliance with the material specification and is in compliance with RCRA and TSCA regulation for liner systems.

Section 3.2, Test Fill Construction

6. *The second bullet at the top of page 5 states that at least two soil moisture and density measurements will be obtained from the test fill soil after each pass of the compactor (between lifts and at the final design thickness). However, Steps 4 and 5 in Section 2.5.2 indicate that testing will be conducted after two passes using the compaction equipment. Clarify the actual protocol to be used for this sampling.*

Arconic Response Appendix C Comment 6: The text in sections 2.5.2 will be adjusted to indicate that testing will be conducted after each pass of the compactor to maintain consistency with the text presented in Section 3.2 requirements.

Section 3.4, Post-Construction Monitoring

7. *Expand this section to note that, after precipitation events, the contractor will specifically evaluate the test fill area and report on any incidents of erosion, soil saturation, ponding, or excessive settlement.*

Arconic Response Appendix C Comment 7: Section 3.4, Post-Construction Monitoring will be revised to include evaluation of the test fill area for any incidents of erosion, soil saturation, ponding and excessive settlement by the Contractor.

Section 5.0 Reporting

8. *Expand this section to note that upon receipt of results from the Test Fill Contractor, the Arconic team will evaluate results to ensure that the constructed LPS liner will satisfactorily achieve all technical specifications and regulatory requirements established pursuant to RCRA and TSCA. As stated in Comment V.1 above, these findings (and documentation of acceptability) must be provided to NYSDEC and EPA prior to initiation of LPS liner construction within the expanded portion of Cell 3.*

Arconic Response Appendix C Comment 8: Section 5.0, Reporting will be revised to note that upon receipt of results from the Test Fill Contractor, the Engineer will evaluate results to ensure that the constructed LPS liner will satisfactorily achieve technical specifications and regulatory requirements established pursuant to RCRA and TSCA. As stated in Arconic Response Specific Comment II.5, the test fill report will be submitted to the NYSDEC for review and approval and to the EPA for review and concurrence.

VI. Comments on CWP Appendix D, Storm water Pollution Prevention Plan

General Comment

1. *The SWPPP is highly inconsistent with regard to inspection schedules. A partial inspection chart is provided on Sheet 3, but does not match schedules discussed elsewhere in the document. For example, whereas the chart calls for daily inspections of the stabilized construction entrances, Detail 3 on Sheet 2 calls for only weekly inspections of such features. Other sections of the SWPP are vague on inspection frequencies. As an example, Detail 7 on Sheet 3 refers to “periodic” inspections. Section 4.5.6 of the SWPPP must be expanded to include a complete and detailed inspection schedule and checklist to ensure that all stormwater management components are properly inspected and adequately maintained; the chart on Sheet 3 may serve as a good basis for an expanded checklist. The SWPPP should then be revised for consistency throughout.*

Arconic Response Appendix D Comment 1: The SWPPP will be revised to include consistent inspection schedules. These inspections will be performed in accordance with the SPDES General Permit and will include daily inspections by a trained contractor and weekly inspections by a qualified inspector.

Section 3.1, Project Construction Activities for Cell 3 Operation and Expansion Mobilization

2. *This section states that work zones, including exclusion zones, will be established across the footprint of the existing landfill cell and expansion area. Expand figures and drawings in the SWPPP to provide a clear map of Cell 3 work zones.*

Arconic Response Appendix D Comment 2: The work zones and exclusion zones will be shown on the drawings included in the O&M Manual. Section 3.1 of the SWPPP will be revised to make note of this.

Section 3.3, Project Construction Activities for Cell 3 Expansion

3. *The second item in this list calls for construction of a western stormwater diversion berm in the Cell 3 expansion area. Clarify whether this construction feature differs from the temporary separation berm to be constructed per Item 5 of Section 3.2. The CWP does not clearly refer to construction of a second berm on the western side of the expansion area. Language in the second paragraph of the CWP (page 6) that refers to a “west berm” had been thought to mean the temporary separation berm. Revise the CWP and SWPPP (and related figures/drawings) to clearly and consistently detail construction components on the western side of the expansion area.*

Arconic Response Appendix D Comment 3: The term ‘western stormwater diversion berm’ refers to the temporary separation berm. The reference to “Western Storm Water” Berm will be replaced with “Cell 3 Temporary Separation Berm” for consistency with the CWP, construction drawings and specifications. Construction components on the western side of the expansion area primarily includes the temporary separation berm as detailed on the construction drawings.

4. *Item 11 should be clarified to note that the expansion activity only includes restoration and revegetation of berms and other disturbed areas outside the limits of waste placement. The full landfill footprint will be capped and revegetation as part of final cell closure activities.*

Arconic Response Appendix D Comment 4: Item 11 will be clarified as suggested.

Section 4.0, Erosion and Sediment Controls

5. *The third paragraph in this section notes that the sediment basin may be needed during construction, landfill operation, and capping. Accordingly, the text should be corrected to note that the sediment basin will not be converted into a retention basin until closure (rather than construction) is completed at Cell 3.*

Arconic Response Appendix D Comment 5: A sediment basin will be created in the exclusion zone during the cell 3 expansion (includes area from temporary berm to the west) for erosion and sediment control during expansion. A sediment basin will only be created outside of the exclusion zone if determined necessary based on visual inspection of erosion and sediment control. None of the sediment basins created either inside or outside of the exclusion zones will be converted into retention basins due to the fact that a retention basin already exists for the landfill site on the northwest side. The text in Section 4.0 will be modified to include this information.

Section 4.1, Erosion and Sediment Control Measures

6. *The sequential list of tasks at the top of page 7 calls for establishment of stormwater management basins (Step 7) after soil disturbance and stabilization of external landfill features (e.g., exterior berm slopes, perimeter access roads). It is unclear why stormwater management basins would not be constructed immediately after excavation of drainage channel and implementation of other stormwater controls (Step 4). Provide additional detail to clarify the proposed sequence of activity in this section of the SWPPP.*

Arconic Response Appendix D Comment 6: Stormwater management systems are already in place for the constructed components of the landfill. If additional stormwater capacity is required based on visual inspection, then they will be constructed as necessary. The task list and text in Section 4.1 will be revised to reflect this approach.

7. *Clarify the last sentence in this section to note that any significant updates or revisions to the SWPPP will require NYSDEC and EPA approval prior to implementation.*

Arconic Response Appendix D Comment 7: Significant SWPPP revisions will be submitted to NYSDEC and EPA for approvals. Minor adjustments to storm water measures will be discussed in the field with the NYSDEC oversight personnel.

Section 4.2, Erosion and Sediment Control Measures

8. *Regulatory citations presented in paragraphs 4 through 7 of this section contain minor errors. Rather than referring to 6 NYCRR Sections 373-2.14(c)(6) through (8), the*

paragraphs should respectively refer to 6NYCRR Sections 373-2.14(c)(7) through (9). Correct the SWPPP accordingly.

Arconic Response Appendix D Comment 8: The references in Section 4.2 will be corrected.

Section 4.3, Temporary Erosion and Sediment Control Measures

9. *Clarify Item 8 on page 9 to indicate whether erosion control blankets will be installed within 14 days after slope construction is complete, consistent with the stabilization timeline presented with regard to Item 5. In addition, Arconic may wish to consider use of commercially available flexible growth media in addition to or in lieu of traditional seeding, mulching, and erosion control blankets at this site.*

Arconic Response Appendix D Comment 9: Slopes steeper than 3H:1V are not anticipated for this project. If the temporary erosion control blanket is used for slopes steeper than 3H:1, the timeline will be consistent with the seeding stabilization, this will be clarified in the work plan.

Section 4.4.1. Establishment of Permanent Vegetation

10. *This section identifies criteria to be used in determining that site stabilization effort are complete. Specifically, this determination requires establishment of a uniform perennial vegetative cover with a density of 80% of surface area coverage, or employment of equivalent stabilization measures (e.g., mulch, geotextile) on all unpaved areas not covered by permanent structures. Placement of a short-term, interim product such as mulch should not be used to document that the site has been stabilized. Only proper revegetation or placement of permanent covers is appropriate to ensure long-term stabilization. Modify the text in this SWPPP section and at the top of page 16 accordingly.*

Arconic Response Appendix D Comment 10: Section 4.4.1 and the text on Page 16 will be modified accordingly.

11. *The SWPPP should be expanded to indicate how frequently and when inspections will be conducted to determine if repairs are needed or confirm that revegetation has been satisfactorily implemented. Because inspections of revegetated areas will need to continue after expansion efforts are complete, it may be appropriate to transfer such inspections to the landfill O&M program.*

Arconic Response Appendix D Comment 11: As part of their routine O&M tasks, the maintenance staff conducts inspections of storm water measures around Cell 3. Following demobilization by the Contractor, if it is determined that storm water measure repairs are required due to Cell 3 Expansion construction, Arconic will oversee that these repairs are completed and will ensure the storm water measures are properly restored.

Section 4.4.4, Permanent Turf Reinforcement

12. *This section calls for placement of permanent turf reinforcement mats (TRMs) on all slopes exceeding 30 percent. However, Section 4.3 (page 9) already calls for erosion control blankets on such slopes. Provide clarification on the distinction between these two types of erosion control, and specifically identify where each will be implemented during the Cell 3 expansion effort.*

Arconic Response Appendix D Comment 12: Section 4.4.4 has been eliminated because slopes steeper than 3H:1V are not anticipated and therefore TRMs are not required.

Section 4.5.1, Solid and Liquid Waste Disposal

13. *Expand the third paragraph in this section to discuss any secondary containment to be provided for vehicles and fuel lines at the refueling station on the edge of the Cell 3 exclusion zone.*

Arconic Response Appendix D Comment 13: Section 4.5.1 will be expanded to include double wall stationary, temporary fuel tanks, drip tubs for fuel lines, and secondary containment with 110% capacity for mobile pick-up truck fuel tanks.

Section 4.5.3. Water Source

14. *Expand the third sentence in this section to clarify whether Arconic anticipates using water that does not originate from an approved public water supply during expansion of Cell 3. If so, the need for and source of such water should be discussed.*

Arconic Response Appendix D Comment 14: Section 4.5.3 will describe the Arconic West Plant hydrant as the water source for filling the water truck (dust control).

Section 4.5.5. Construction Housekeeping Practices

15. *Expand Item 2 in this section to note that all areas designated for equipment cleaning, maintenance, and repair will be protected by both a temporary perimeter berm and plastic sheeting as described in Detail 10 from SWPPP Sheet 3. Under no circumstances should such activities occur directly on the bare ground surface, so as to minimize potential for environmental contamination. Depending on the materials being stored, this caveat may also apply to storage areas listed in the third bullet at the bottom of page 15.*

Arconic Response Appendix D Comment 15: Heavy equipment working within the PCB-impacted portion of Cell 3 will be decontaminated within Cell 3's decontamination area and wipe tested prior to leaving Cell 3. Equipment used outside the PCB-impacted portion of Cell 3 is considered not contaminated and will be cleaned outside the decontamination area. This will be clarified in the CWP.

Sheet 2, Soil Erosion and Sediment Control Details

16. *Detail 1 on Sheet 2 presents schematics and specifications for catch basins with inlet protection. However, this feature is not identified for use on Figure 2 or Sheet 1 of the SWPPP. Revise those drawings to show the proposed catch basin location(s).*

Arconic Response Appendix D Comment 16: Comment acknowledged. The catch basins to be protected will be clearly identified on Sheet 1.

17. *Detail 5 on Sheet 2 is not intuitively understood, primarily because the profile appears to differ from the Section B-B diagram in shape and angle along the downgradient slope of the dam. Provision of a top view and/or isometric drawing of the stone check dams would be useful to enhance clarity in the construction of this feature.*

Arconic Response Appendix D Comment 17: Detail 5 on Sheet 2 is a standard detail included in the New York State Standards and Specification for Erosion and Sediment Control (Blue Book), dated November 2016 as issued by the NYSDEC. A reference to the New York State Standards and Specification for Erosion and Sediment Control (Blue Book) will be added to Sheet 2.

Sheet 3, Soil Erosion and Sediment Control Details

18. *Item 5 in the Project Construction Sequencing Notes should be clarified to call for establishment of permanent vegetation after Cell 3 expansion efforts are complete, but only temporary vegetation upon winter suspension of landfilling operations.*

Arconic Response Appendix D Comment 18: Comment acknowledged. Item 5 will be clarified.

19. *Detail 10 on Sheet 3 presents schematics and specifications for concrete truck washout areas. However, this feature is not identified for use on Figure 2 or Sheet 1 of the SWPPP. Revise those drawings to show the proposed truck washout location(s).*

Arconic Response Appendix D Comment 19: Detail 10 on Sheet 3, Concrete Truck Washout Area is required for all projects that have concrete placement. The leachate transfer pipe will be installed with a concrete footing. The washout area location requirements are called out in the detail on Sheet 3 and shall be field located based on site conditions.

Comment on CWP Appendix E, Project Schedule

1. *The Test Fill Work Plan (Appendix C) and Specification 02201A (paragraph 3.03B) call for a 14-day post-construction monitoring period and a 7-day period for Agency review. However, the project schedule in Appendix E (line items 2.3.8.1 and 2.3.8.3) currently stipulates only 10 and 5 days, respectively, for these tasks. Revise the project schedule to account for the full test fill area monitoring and report review timelines.*

Arconic Response Appendix E Comment 1: The schedule will be adjusted accordingly to account for a full 14-day post-construction monitoring period and a 7-day period for Agency review.

VII. COMMENTS ON THE CQAP

Section 2.1.1, Project Organization and Responsibilities

1. *This section states that the Construction Quality Assurance (CQA) Officer reports its quality assurance (QA) results to the CDM Smith design engineer, the construction contractor, and Arconic. However, Figure 2-1 shows the CQA Officer reporting only to Arconic. Revise the figure to show direct reporting of QA results to Arconic, with concurrent release of findings to the CDM Smith design engineer and construction contractor.*

Arconic Response CQAP Comment 1: The text in Section 2.1.1 will be revised to clarify the difference between organizational structure and QA results distribution. Figure 2-1 presents a clear separation between the CQA team and the design engineer. The CQA team has been contracted directly by Arconic to provide third party, independent verification that the project is being constructed per the approved design. Whereas, QA results are factual information that will be distributed to the entire team for informational purposes only. These QA results help advance the project by allowing team members to make informed decisions; the QA results will be accumulated in the final certification report.

Section 2.1.1.2, Arconic

2. *Revise the second sentence in this section to also refer to Federal approval and permission to operate. For the same reason, Sections 2.1.2 should also be modified to include advance notification to EPA of CQAP-required meetings.*

Arconic Response CQAP Comment 2: Sections 2.1.1 and 2.1.2 will be revised accordingly.

Section 2.3, Inspection Activities

3. *Numbering of specific work items listed in this section are duplicative and inconsistent with that provided in Tables 2-3 through 2-6. Revise the text and tables to use a standard numbering scheme to facilitate tracking of testing and observation requirements during the pre-construction, construction, and post-construction periods.*

Arconic Response CQAP Comment 3: The specific work items list was not anticipated to correspond with each of the tables and was intended to present the general work item categories that would be discussed for each of the work activities on Tables 2-3 through 2-5. The work item list in Section 2.3 will be changed to a bullet list and text will be added to specify that only applicable work items will be expanded upon for each work activity and associated table.

Section 2.3.3. Removal of Existing Waste and Liner from East Berm

4. *Expand this section to discuss wipe sampling activities to be conducted to ensure that the liner has been adequately decontaminated during temporary removal. Similarly, expand Table 2-6 to document CQA team responsibilities regarding oversight and/or verification of this component of decontamination testing.*

Arconic Response CQAP Comment 4: Wipe sampling of the liner is discussed in detail on page 7 of the CWP and the wipe criteria established is PCBs < 10 ug/100cm². This information will be added to Section 2.3.3 and Table 2-6.

Table 2-3, Secure Landfill CQA Preconstruction Activities

5. *Expand actions under Work Item II (Dikes/Berms) to require the CQA team to review the test fill report to ensure that the test fill effort was properly completed and consistent with recommendations for full scale implementation during LPS liner construction.*

Arconic Response CQAP Comment 5: This table will be revised to include review of the test fill completion by the CQA team as noted.

6. *Activities under Work Item III (LPS Liner Bottom) include confirmation of on-site borrow source test fill acceptance. Clarify this section to indicate whether the test fill construction will be limited to material obtained on site, or if an off-site source of borrow soil may be tapped to provide this material. It is expected that the same borrow sources will be used to obtain material for liner construction.*

Arconic Response CQAP Comment 6: Low permeability soil (clay) for test fill and the clay liner will be sourced from the same pre-approved off site borrow source by Arconic. On site clay borrow sources will not be used for test fill or clay liner construction. References to on site clay borrow source will be removed from Table 2-3.

Table 2-4, Secure Landfill CQA Construction Activities

7. *Activities listed under Work Item I (Subgrade) include confirmation that herbicide was properly applied to the subgrade within the Cell 3 expansion area. However, the CWP makes no mention of herbicidal application. Revise the expansion documentation to fully discuss the purpose of this step and to outline expectations for its implementation.*

Arconic Response CQAP Comment 7: Table 2-4 will be revised to eliminate any reference to herbicide.

8. *Revise activities and comments under Work Item II (Removal of Existing Waste and Primary/ Secondary Liner from East Berm of Cell 3) to clarify that the upper liner layers will be removed across the entire footprint of the Cell 3 expansion (including beneath the temporary berm location), and that the base LPS will not*

be removed during site preparation. Expand the second work activity to discuss observation of required wipe sampling to ensure adequate decontamination of liner components, and indicate whether the CQA team will collect their own wipe samples for confirmation.

Arconic Response CQAP Comment 8: Table 2-4 will be modified accordingly.

9. *Properly align activities, comments, and actions in the first row at the top of page 2 of this table to ensure that additives are not employed during expansion of Cell 3 and that received loads of clay are properly evaluated for the presence of objectionable material.*

Arconic Response CQAP Comment 9: Table 2-4 has been corrected to properly align activities, comments and actions related to use of additives and presence of objectionable materials in low permeability soil.

10. *Clarify the first comment under Work Item V (LPS Liner) to note that the lift thickness is not to exceed nine inches after compaction. Expand the third activity in this row (bottom of page 2) to address integration of new and existing liner components at Cell 3. Clarify the last activity under this Work Item (top of page 3) to call, not only for documentation of all instances of desiccation and clay soil layer penetration, but also monitoring and confirmation of associated repairs.*

Arconic Response CQAP Comment 10: Installation of clay for the clay liner shall be in accordance with Paragraph 3.01 of specification Section 02201 – Low Permeability Soil. Reference to Section 02201 will be included under Work Item V, Table 2-4 and lift thickness requirements will be revised to conform to specification Section 02201, Paragraph 3.01.

Requirements for proper scarification of existing clay liner surface prior to placement of new clay liner lifts has been added to Table 2-4 to address proper bonding of new to existing clay liner.

The CQA inspector will be completing Problem Identification and Correction Reports for all incidents of damage to the clay soil layer or other liners. These reports will also include documentation of the associated repairs and be attached to the Cell 3 Expansion Certification Report. This section will be clarified.

11. *Revise comments in the first row on page 4 of this table to refer to CQAP Tables 2-8 through 2-12. Also, expand this row to document the amount of entrained soil that would cause the geotextile to be rejected and replaced.*

Arconic Response CQAP Comment 11: Table 2-4 Work Item VI: Liner and Cap Materials will be revised to include appropriate reference to Tables 2-8 through 2-12 which include CQA requirements for the geomembrane liner. The rejection of the geotextile for entrainment of soil will be at the discretion of the CQA inspector based on visual observation. This clarification has been added to Table 2-4.

12. *Modify the activities listed under Work Item VII (Leachate Collection Systems [LCS]) for consistency with Section 2.3.7 of the CQAP. As noted in that section and Table 2-5, the LCS for Cell 3 was installed when the unit was first constructed in 2005. Thus, the only necessary actions for the expansion involve installation of the granular soil drainage layer and tie in to the existing drainage system. Accordingly, the referenced row in Table 2-4 need not address bedding layer placement, pipe installation, sumps and structures, or mechanical/electrical equipment installation. Related discussion under Work Item V on Table 2-5 should also be updated to note that mechanical and electrical components of the LCS will not be needed. Nevertheless, the CQA team should confirm that drainage from the expansion is being properly routed to the existing LCS before construction is formally complete; this last step should be incorporated into Section 2.3.7 of the CQAP.*

Arconic Response CQAP Comment 12: References to construction items for Leachate Collection Systems in Tables 2-4 and 2-5 will be reviewed and construction items that are not applicable to Cell 3 expansion will be removed. Section 2.3.7 will be expanded to include confirmation by the CQA team of proper routing of drainage from the expansion to the existing LCS.

Table 2-6, Secure Landfill COA Summary of QA Testing

13. *Inspection items listed under Work Item III (LPS Liners) should be expanded to note that the CQA team is also responsible for observing and ensuring integration of existing and new liner components. The frequency of organic content testing for borrow sources should be changed to once for every 1,000 cubic yards of incoming material for consistency with those presented in Table 2-7.*

Arconic Response CQAP Comment 13: Table 2-6, Work Item III (LPS Liners) has been expanded to include integration of existing and new liner as a CQA component. Table 2-6 has also been revised to replace “as required” with “Every 1,000 cy” for organic content lab testing.

Section 2.3.6. Geosynthetic Liners

14. *Revise the second and third paragraphs in this section to refer to Appendices C and D, respectively.*

Arconic Response CQAP Comment 14: The requested references will be added to Section 2.3.6.

Table 2-7, Secure Landfill CQA Low-Permeability Material QA Clay Characteristics and Screening

15. *For consistency with Table 2-6, expand the first row to include testing of borrow source material for susceptibility to frost damage per ASTM Method 560.*

Arconic Response CQAP Comment 15: Testing for susceptibility to frost damage is not required as the gray clay that will be used for Cell 3 expansion has been used for construction of previous SLF cells. This field test (susceptibility to frost damage per ASTM Method 560) will be eliminated from Table 2-6.

16. *Revise testing frequencies specified in the last row of this table for consistency with the text of Section 2.4.1 (page 2-34) and Table 2-6.*

Arconic Response CQAP Comment 16: Testing frequencies will be revised in Table 2-7 to be consistent with Section 2.4.1 and Table 2-6.

Table 2-8, Secure Landfill COA Geosynthetic QA Testing/Inspection Matrix

17. *Expand this table to specify responsibilities and frequencies for thermogravimetric analysis and differential scanning calorimetry, peel adhesion, and bonded shear strength.*

Arconic Response CQAP Comment 17: Table 2-8 will be corrected to specify responsibilities and frequencies for thermogravimetric analysis (manufacturer; 1 per 40,000 sf), differential scanning calorimetry (manufacturer; 1 per 40,000 sf), peel adhesion (CQA team; 1 per 500 lf), and bonded shear strength (CQA team; 1 per 500 lf).

18. *Laboratory testing details currently listed for vacuum testing actually apply to destructive testing, as per Table 2-12; correct this column accordingly.*

Arconic Response CQAP Comment 18: Laboratory testing details will be revised accordingly in Table 2-8.

Table 2-10, Secure Landfill CQA Geosynthetic Liner — General Seaming Procedures

19. *Revise the last bullet in this table to replace the word “coot” with “cool”.*

Arconic Response CQAP Comment 19: The typographical error in Table 2-10 will be revised.

Section 2.4.1. Low-Permeability Soil Liners

20. *Clarify the first paragraph to note that, as specified in Table 2-6, field permeability testing will be conducted at a rate of one per acre (consisting of nine cells) per lift.*

Arconic Response CQAP Comment 20: This section will be modified to be consistent with Table 2-6.

21. *The third paragraph in this section notes that the results of field permeability testing will be averaged to determine the average permeability of the full thickness of the clay liner (comprised of four separate lifts). However, it is unclear whether these lift-specific measurements will be obtained in the same location within each acre. Averaging lift-specific data in the same location is acceptable to document achievement of sufficiently low permeability in that portion of the liner. However, if different sampling locations will be evaluated upon completion of each lift, there will be no way to confirm that any unacceptably low lift-specific permeability results have been adequately addressed by prior or subsequent lift placement in that area. Clarify the procedures to be followed for making these field permeability measurements, or revise the CQAP to indicate that the results will not be averaged and that any lifts not meeting the minimum required permeability objectives will require corrective action.*

Arconic Response CQAP Comment 21: Section 2.4.1 has been revised to indicate that the permeability testing will be conducted for each lift of the clay liner and that all permeability

measurements for individual lifts must meet the specification requirements in accordance with Section 02201: Low Permeability Soil, 2.01.

Section 2.4.5.3, Problem Identification and Corrective Measures Reports (PICRs)

22. According to this section, the CQA officer is responsible for preparing PICRs when material or workmanship does not meet the specified design. Although the CQAP directs these reports to be directed to Arconic, the construction contractor, and the project engineer, the CQAP does not specify *when* the PICRs will actually be transmitted to their intended recipients. If details in the PICRs may impact ongoing work, the CQA officer should ensure that they are sent prior to submittal of final documentation pursuant to Section 2.4.9. Revise the document to call for timely submittal of all PICRs.

Arconic Response CQAP Comment 22: Section 2.4.5.3 will be revised to call for timely submittal of all PICRs.

Appendix A. Control, Inspection, Measurement, and Testing Matrix, page A-1

23. The qualifier “CQA/CONT” is not used in the matrix. Clarify in what cases the contractor is expected to collect samples for the CQA inspector, and clarify whether the inspector is expected to observe those activities.

Arconic Response CQAP Comment 23: For this project, all areas that require CQA samples are accessible by the CQAI. If there was an area not easily accessible that required Contractor equipment to collect (i.e., deep excavation confirmatory soil location), the “CQA/CONT” would be used. Also, if a certain test fails and the Contractor has moved forward with work without authorization, the CQAI may request a follow-up sample/test that the Contractor must provide before proceeding with the work. Again, this scenario would be a rare case and not routine and will be clarified in the document.